

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTONFURTHER SYSTEMATIC NOTES ON THE  
AVIFAUNA OF PANAMABY ALEXANDER WETMORE  
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The descriptions and records in the following pages have come to my attention through further field work and research concerned with a second part of an account of the species of birds found in the Isthmus of Panamá. They include studies made on collections of other institutions, in addition to those of the U. S. National Museum.

## DESCRIPTIONS OF NEW SUBSPECIES

***Neocrex columbianus ripleyi* subsp. nov.**

*Characters:* Similar to *Neocrex columbianus columbianus* Bangs<sup>1</sup> but decidedly darker; crown and occiput darker gray; brown of the remainder of the upper surface and the flanks darker; remiges olive gray; under surface darker; under tail coverts pale cinnamon-buff, basally white.

*Description:* Holotype, U. S. National Museum no. 532988, ♂, from Achiote, Colón, Panamá, collected 8 November 1965, by Henry van Horn of the Gorgas Memorial Laboratory. Crown and occiput dark mouse gray; hindneck, scapulars, back and rump olive-brown; upper tail coverts and tail duller, fuscous; primaries and secondaries between mouse gray and deep mouse gray; wing coverts buffy brown; chin and throat white; sides of head, fore neck, breast and sides deep neutral gray; flanks drab (without bars); center of abdomen clear white; under wing coverts white, with dusky streak along wing edge.

*Measurements:* Holotype, wing 98.2, tail 29.7, culmen from base 21.7, tarsus 31.4 mm.

*Remarks:* The holotype collected in the Caribbean lowlands in the western sector of the Province of Colón, near the northwestern boundary of the Canal Zone, is the first record of this group of rails north of South America. The Colombian relative, *Neocrex columbianus*, de-

<sup>1</sup>*Neocrex columbianus* Bangs, Proc. Biol. Soc. Washington, vol. 12, 31 October 1898, p. 171. (Palomina = Palomino, 1500 meters elevation, Sierra Nevada de Santa Marta, Magdalena, Colombia.)

scribed originally from the Sierra Nevada de Santa Marta, is now known to range in small numbers through Colombia, from west of the Eastern Andes south into northwestern Ecuador. Currently *columbianus* has been listed as a geographic race of *Neocrex erythropis* (Sclater), also little known. The typical form of *erythropis* is found from Perú and Brazil southward to northwestern Argentina. A closely allied subspecies, *olivascens* Chubb, is recorded from the Eastern Andes of Colombia through Venezuela. These two subspecies are closely similar in the pattern on the flanks and under tail coverts, which is slate gray barred with white. Also the nostril in these two subspecies is widely open and easily seen to be pervious. Typical *columbianus* and *ripleyi* have the bill more slender, with the external slit of the external nares narrowed by the greater width of the membrane on the upper margin of the opening. These are such evident differences that it seems reasonable to treat *erythropis* and *columbianus* as distinct species, each with two races.

In addition to the holotype of *ripleyi*, I have another male collected at Acandí, extreme northern Chocó, Colombia, taken in low second-growth near the Río Acandí on 2 January 1950, by M. A. Carriker, Jr.

*Etymology*: This interesting race is named for S. Dillon Ripley, Secretary of the Smithsonian Institution, in recognition of his studies on the intriguing family of the Rallidae.

*Specimens examined in comparisons*: *Neocrex columbianus columbianus*, COLOMBIA—MAGDALENA: Palomino, ♀ (holotype). VALLE: San Antonio, ♂. NARIÑO: Barbacoas, ♂, ♀; La Guayacana, 2♀. ECUADOR—Pambilar, ♂; San Javier, 2♂, ♀; Puente del Chimbo, ♂; Santo Domingo, 2♀.

#### *Phaeochroa cuvierii furvescens* subsp. nov.

*Characters*: Similar to *Phaeochroa cuvierii cuvierii* DeLattre and Bourcier,<sup>2</sup> but foreneck, upper breast and sides darker green; averaging darker green above; lower breast and abdomen slightly duller pinkish buff; slightly larger.

*Description*: Holotype, U. S. National Museum no. 448750, ♂, Zapotillo, 30 km west of Soná, Veraguas, Panamá, collected 19 May 1953, by A. Wetmore and W. M. Perrygo (original no. 17592). Upper surface, including wing coverts and upper tail coverts, bright metallic green; crown somewhat duller than back; wings dusky with faint violaceous sheen; two outer rectrices distally sooty black, tipped with white; outer webs of these two rectrices basally, and of remaining pairs entirely dark, faintly bluish green; foreneck, upper breast and sides like back, but with feathers tipped very narrowly with brownish gray, which produces faintly squamate pattern; center of lower breast

<sup>2</sup> *Trochilus Cuvierii* Ad. DeLattre and J. Bourcier, Rev. Zool., vol. 9, Sept. (Nov.), 1846, p. 310. ("isthme de Panama et Teleman, Amér. Centr." Here restricted to Panama City, Panamá.)

and abdomen drab-gray, changing at outer edge of feathers to vinaceous-buff; tuft of fluffy white in femoral area on both sides; under tail coverts basally somewhat brighter green than breast, dusky gray externally, edged with white. Maxilla and tip of mandible black; base of mandible pale dull pinkish-buff; lower part of tarsus, toes and claws black (from dried skin).

*Measurements (average in parentheses)*: Males (14 from Chiriquí, Veraguas and Los Santos), wing 70.1–75.8 (72.4), tail 41.0–45.6 (43.2, average of 13), culmen from base 22.7–26.6 (24.0) mm.

Females (10 from Chiriquí, Veraguas and Los Santos), wing 68.4–72.4 (70.0), tail 42.0–45.8 (43.7), culmen from base 23.8–26.7 (25.5, average of 9) mm.

Holotype, male, wing 73.4, tail 43.8, culmen from base 23.9 mm.

*Range*: Tropical lowlands of western Panamá in Chiriquí, southern Veraguas, including the western side of the Azuero Peninsula, and Los Santos.

*Remarks*: The population here described as a distinct race currently has been placed with *Phaeochroa cuvierii saturator*, named for its darker color by Hartert in 1901 from Isla Coiba, a large island which lies isolated, approximately 30 km at sea southwest of the coast of Veraguas. This race was known only from the rather brief original description until my visit to Coiba in 1956. The seven specimens of *saturator* now available prove that the race is valid, but also show definitely that the mainland population that has been identified with it differs in such a paler coloration that it requires a name.

The typical race *Phaeochroa c. cuvierii* is found in central Panamá from the Canal Zone east on the Pacific side through the eastern sector of the Province of Panamá, and on the Caribbean slope through the Comarca de San Blas nearly to the boundary with Colombia. The broad expanse of the savanna region of Herrera, Coclé and western Panamá Province, an area from which these hummingbirds as yet are unknown, separates it from the race *furvescens*. A population, lighter in color, *Phaeochroa c. maculicauda* Griscom, is found in Costa Rica.

In the original description of *cuvierii* the specimens are indicated as collected by "Ad. DeLattre," who is known to have travelled in Guatemala, Nicaragua, Panamá and Perú. The locality cited as "isthme de Panama et Telemán, Amér. Centr." requires restriction as Telamán in eastern Guatemala is in the range of a related hummingbird, *Phaeochroa roberti* (Salvin). In that early day DeLattre would have come to Panamá either on the Caribbean coast, or by way of Panama City on the Pacific. It is appropriate to designate the type-locality as Panama City.

*Etymology*: The subspecific name for this race has been taken from the Latin *furvescens*, meaning dusky.

*Specimens examined in comparisons*: *Phaeochroa cuvierii cuvierii*, PANAMÁ—CANAL ZONE: Gatun, ♂, 2♀; Lion Hill, 4♂, 2♀; Juan Mina, 2♂, ♀. PROVINCE OF PANAMÁ: La Jagua, ♂; Pacora, ♂, ♀;

Chimán, ♂. SAN BLAS: Mandinga, 2♂. *Phaeochroa cuvierii maculicauda*, COSTA RICA—Pigres, 2♂, 6♀; El General, ♂; Bebedero, ♂, 2♀; El Zapotal, 2♂, ♀; Buenos Aires, ♂, ♀; San Pedro, ♂. *Phaeochroa cuvierii saturator*, Isla Coiba: 5♂, 2♀.

***Haplophaedia aureliae galindoi* subsp. nov.**

*Characters*: Similar to *Haplophaedia aureliae floccus* (Nelson)<sup>3</sup> but darker green above and below; upper tail coverts darker, duller rufous; female, with white edgings on feathers of lower surface narrower, less prominent, so that the spotting is heavier.

*Description*: Holotype, U. S. National Museum no. 484355, adult ♂, from 1425 m elevation on Cerro Malí, Darién, collected 21 February 1964, by A. Wetmore (original no. 25910). Crown metallic spinach green, with the feathers tipped with dusky; nape, hindneck, cheeks and an indefinite line over eye light bronze-green; back, rump, and greater to lesser wing coverts metallic grass green; upper tail coverts dull green basally, changing to bronzy cinnamon-brown on tips; rectrices dull black, with faint sheen of bluish green; wings fuscous, with faint purplish sheen; under wing coverts dull grass green; narrow line on edge of wing rufous anteriorly, buffy white distally; foreneck, breast, sides of abdomen and under tail coverts dark metallic grass green, with each feather dark basally, tipped lightly with grayish, the light tipping wider, more prominent on lower breast and sides of abdomen; center of abdomen somewhat grayish white; prominent, elongated tibial tufts pure white, mixed slightly with cinnamon-buff.

The holotype in the flesh had the iris dark brown; cutting edge of the mandible dull yellow (concealed within the maxilla when bill was closed); rest of bill black; tarsus and toes fuscous; claws black.

A female, taken 20 Feb. 1964, was similar to the male, except that the front of the tarsus and the top of the toes were dark brown; back of tarsus and under side of toes dull buffy white.

*Measurements (averages in parentheses)*: Males (10 from Cerro Malí and Cerro Tacarcuna, Darién), wing 59.9–63.5 (61.5), tail 38.5–40.3 (39.0), culmen from base (20.0–21.7 (20.5) mm.

Females (4 from Cerro Malí and Cerro Tacarcuna, Darién), wing 55.7–57.8 (56.8), tail 34.3–35.2 (34.7), culmen from base 20.0–20.8 (20.3) mm.

Holotype, wing 62.3, tail 38.3, culmen from base 20.0 mm.

*Range*: Known from the summit of Cerro Malí and the adjacent slopes of Cerro Tacarcuna, Darién, Panamá; extending across the international boundary to the head of the Río Cutí, Chocó, Colombia.

*Remarks*: The first specimens of this interesting hummingbird were taken by Harold E. Anthony and David S. Ball, 11 April 1915, on the

<sup>3</sup> *Eriocnemis floccus* Nelson, Smithsonian Misc. Coll., vol. 60, no. 3, 24 Sept. (27 Sept.) 1912, p. 8. (Cerro Pirre, at 1525 m elevation, near the head of Río Limón, Darién.)

Atlantic slope of Cerro Tacarcuna on the Colombian side of the boundary. Previously E. W. Nelson (1912, p. 8) described a hummingbird of this species from Cerro Pirre, Darién as *Eriocnemis floccus*. Simon (1921, p. 374), though apparently he had seen no specimens, placed Nelson's name (spelled "*flocens*" through error) in the synonymy of a subspecies *Haplophaedia aureliae caucensis* that he had described from northwestern Colombia. Griscom (1935, p. 323) in his catalog of the birds of Panama accepted this action, and in the range outlined under the subspecies name *caucensis* listed records from Tacarcuna, in addition to those from Pirre. As Cerro Pirre is an isolated mountain mass separated by extensive lowlands from the West Andean range of *caucensis* it has been no surprise on comparison of the series of specimens from Colombia now available, through collections made by M. A. Carriker, Jr. for the Smithsonian, to find that Nelson's description is valid. His bird, under modern terminology, is to be recognized as *Haplophaedia aureliae floccus*. It is probable that the race *galindoi*, known now from specimens from Cerro Tacarcuna and its spur Cerro Malí, may extend for some distance to the north along the Serranía del Darién, a region whose avifauna is as yet unknown.

*Etymology*: The race is named for Dr. Pedro Galindo of the Gorgas Memorial Laboratory in Panamá, in recognition of his constant interest in the avifauna of his county.

*Specimens examined in comparisons*: *Haplophaedia aureliae aureliae*, COLOMBIA—ANTIOQUIA: Valdivia, ♂ 2 adult, 1 immature, ♀ 1 immature, 1 with sex?. HUILA: Belén, 3♂, 4♀. SANTANDER: Virolín, 2♂, 2♀. Bogotá tradeskins, 27 without indication of sex or locality. *Haplophaedia aureliae floccus*, PANAMÁ—DARIÉN: Cerro Pirre, 3♂, including the holotype, 8♀. *Haplophaedia aureliae caucensis*, COLOMBIA—ANTIOQUIA: La Bodega, 2♂, 6♀; Uirao, 3♂, 1♂?; Hacienda Potros, 10♂. CAUCA: Road Cali-Buenaventura, ♂; Tijeras (Moscopán), 2♀; Cerro Munchiquito ♂, ♀; San Antonio, ♂, ♀; El Roble, ♂; E. of Palmira, sex?; Gallera, west of Popayán ♂.

#### *Hylocharis eliciae earina* subsp. nov.

*Characters*: Similar to *Hylocharis eliciae eliciae* (Bourcier and Mulsant)<sup>4</sup> but definitely darker above, being dark metallic green, with crown and back nearly uniform; coppery brown of upper tail coverts and lower rump slightly darker; this color less extensive on upper rump; tail duller metallic bronze-green.

*Description*: Holotype, U. S. National Museum catalog no. 423199, adult ♂, collected at 225 m elevation in the Quebrada Chucantí, Cerro Chucantí, eastern Province of Panamá, Panamá, 16 March 1950, by A. Wetmore and W. M. Perrygo (original no. 15724). Dorsal surface from

<sup>4</sup> *Trochilus Eliciae* Bourcier and Mulsant, Ann. Sci. Phys. Nat. Agric. Industr., Soc. Roy. Agric. Lyon, vol. 9, 1846, p. 314. (Provenience unknown, type-locality here designated as Cobán, Alta Verapaz, Guatemala.)

forehead to upper rump metallic forest green, with feathers of crown tipped narrowly with dusky; lower rump and upper tail coverts metallic hazel; rectrices, on both upper and lower surfaces, glittering bronze-green; greater, middle and lesser wing coverts metallic deep grape green; wings, including primary coverts, dusky, with faint purplish sheen; anterior lores and chin cinnamon-buff, spotted with iridescent violet-blue, these markings increasing until on lower foreneck they cover entire feather; sides of breast and abdomen metallic light cress green; center of breast and abdomen somewhat dull pinkish-buff; under tail coverts olive-gray bordered rather widely with clay color; under wing coverts metallic cress green.

Iris dark brown; distal end of maxilla and mandible slaty black, varying in extent from extreme tip to more than half of length; rest of bill (usually more than half of length) light red; tarsus, toes and claws slaty black. (From recently killed specimens.)

*Measurements (averages in parentheses):* Males (17 from Isla Coiba, Isla Gobernadora, Chiriquí, Los Santos, Province of Panamá, and Darién), wing 48.2–51.8 (49.7), tail 25.6–28.1 (26.7), culmen from base 17.0–19.6 (18.2) mm.

Females (6 from Isla Coiba, Isla Ranchería, Chiriquí, and Province of Panamá) wing 46.4–49.8 (47.7), tail 25.2–27.2 (25.9), culmen from base 18.6–20.0 (19.4, average of 5) mm.

Holotype, wing 50.0, tail 26.6, culmen from base 18.7 mm.

*Range:* Local on the Pacific slope in Panamá from Chiriquí through Veraguas, the Azuero Peninsula, and the Province of Panamá to eastern Darién; also on the Caribbean slope in the lower Chagres Valley (Lion Hill, Gatun). Islas Coiba, Ranchería and Gobernadora.

The 31 specimens of the species *Hylocharis eliciae* in the National Museum collections from the northern part of the range in Chiapas, Guatemala, Honduras, Nicaragua and Costa Rica differ decidedly from the series from Panamá in the lighter color of the dorsal surface, which in these northern birds is bright metallic bronze-green from the pileum to the lower back, with lower rump more reddish brown. The tail, on both upper and lower surfaces also is a brighter metallic bronze-green. The northern series appears fairly uniform, with the exception of an occasional specimen that is somewhat brighter in color, particularly on the rump and upper tail coverts, where a few feathers may be almost red. Size is similar to that of the population of Panamá.

*Etymology:* The subspecific name for the race of Panamá is from the latin adjective *earinus*, meaning greenish.

*Remarks:* Carriker and de Schauensee, (1935, p. 422) suggested the possibility of a southern race, but without conclusion, as they compared their single specimen from Guatemala with six others that included birds from Honduras, Nicaragua and Costa Rica in addition to Panamá.

Bourcier and Mulsant in 1846 described *Trochilus eliciae* (named in honor of "Mme. Elicia Alain") from a specimen without data as to the country of its origin, so that it is necessary in connection with the present

description to establish a type-locality for the nominate form. A probable source for the original specimen should be sought in the period prior to the original description. The name of the naturalist Delattre comes to mind at once, as he travelled extensively in tropical America in that early period. Further, while his principal search was for plants, including orchids, he found hummingbirds attractive and collected numerous examples that came to ornithologists of the time. Griscom (1932, p. 5) writes that "Delattre visited Guatemala in 1842, and remained in Vera Paz for nearly a year, with headquarters at Coban." Concerning *Hylocharis eliciae* Salvin and Godman (1892, vol. 2, p. 312) state that in "Guatemala it is by no means common . . . we only met with the bird on rare occasions on both sides of the main mountain-chain. Some of them were obtained at Coban." It seems appropriate then to designate Cobán, Alta Verapaz, Guatemala, as the type-locality of *H. eliciae*.

*Specimens examined in comparisons: Hylocharis eliciae eliciae*, MÉXICO—CHIAPAS: Ocuilapa, ♂. GUATEMALA—Gualán, ♂; Masagua, ♂. HONDURAS—Santa Ana, ♂; Río Coco (Segovia), ♂. NICARAGUA—Sucuya, ♂. COSTA RICA—San Pedro (Mojón), 2♂, 4♀; Pigres, 3♂, ♀; Liberia, 2♂, ♀; Río Turubales, ♂, 2♀. With incomplete data from Guatemala and Costa Rica—9.

***Lampornis castaneiventris* homogenes** subsp. nov.

*Characters:* Male with throat violet-purple, like *Lampornis castaneiventris calolaema* (Salvin),<sup>5</sup> but with breast and abdomen darker gray; female darker, more rufous on lower surface, like that of *L. c. castaneiventris* (Gould), but somewhat darker, more bluish green on dorsal surface; central rectrices darker bronze-green; white tipping on outer rectrices less in extent; bluish black subterminal band broader.

*Description:* Holotype, American Museum of Natural History no. 246095, adult ♂, Chitra, 1430 meters elevation, Veraguas, Panamá, collected 26 February 1926, by R. R. Benson (original no. 2281). Forehead and crown metallic emerald-green, varying to bluish green with change in angle of light; upper surface from hindneck to upper tail coverts, including wing coverts, rather dull bronze-green; tail dull, slightly bluish black; inner secondaries dull bronze, greenish on the outer webs; rest of wing dull, somewhat purplish brown; side of head dusky bronze-green, with a prominent post-ocular streak of white; chin and throat metallic violet to purple, the feathers basally dull white; upper breast and sides dull metallic bronze-green; lower breast and abdomen light grayish olive; under tail coverts dusky, edged narrowly with dull white; tibial plumes white; under wing coverts dull bronze-green.

*Measurements (average in parentheses):* Males (10 from eastern

<sup>5</sup> *Oreopyra calolaema* Salvin, Proc. Zool. Soc. London, 1864 (February 1865), p. 584. (Volcán de Irazú, Costa Rica.)

Chiriquí and Veraguas), wing 62.2–65.9 (63.4), tail 33.6–37.6 (35.6), culmen from base 19.6–21.2 (20.5) mm.

Females (11 from eastern Chiriquí, Veraguas and western Coclé), wing 55.1–57.5 (56.4), tail 31.8–33.3 (32.5), culmen from base 20.8–22.6 (21.5) mm.

Holotype, wing 62.5, tail 34.5, culmen from base 20.7 mm.

*Range:* Subtropical zone in mountains of eastern Chiriquí (Cerro Flores, Cordillera de Tolé), Veraguas (Santa Fé, Chitra), and western Coclé (Alto Carvallo, north of El Copé).

*Etymology:* The name *homogenes* given to the race described above is from the Greek, meaning "of the same kind."

*Remarks:* *Lampornis castaneiventris*, found in mountain areas from northwestern Nicaragua through Costa Rica to western Panamá, has presented difficulties in taxonomic treatment. In its early history the females were regarded as a separate species, with the males distributed among two more according to their white or purple throat color. In due time the identity of the females was established, but uncertainty remained as to species limits. In recent discussions Berlioz (1949, pp. 4–5), from examination of about 50 males, finally outlined his belief that the group as a whole is a complex, a species in which the characters of the males are not completely stable. Blake (1958, pp. 519–521) regarded them as divided in two species, with some apparently aberrant individuals produced as hybrids.

Following study of more than three times the number of specimens seen by Berlioz I have been led to agree with his conclusion. The extensive series seen allows recognition of five populations segregated geographically in which more than 90 per cent of the individuals possess restrictive characters of color, and so may be treated as subspecies. All are to be listed as races of *castaneiventris*, which has priority in publication. Following is a brief summary of the other races.

*Lampornis castaneiventris castaneiventris* (Gould)

*Trochilus* (———?) *castaneiventris* Gould, Proc. Zool. Soc. London, pt. 18, 1850 (28 February 1851), p. 163. (Volcán de Chiriquí, 1800 m, Chiriquí, Panamá.)

*Oreopyra leucaspis* Gould, Proc. Zool. Soc. London, pt. 28, 18, August 1860, p. 312. (Volcán de Chiriquí, 2750–3000 m, Chiriquí, Panamá.)

*Characters:* Male, in normal phase, with throat white, rarely with this area violet-purple; tail black to bluish black; breast darker gray than in *cinereicauda*; female, darker, more rufous on lower surface than in *calolaema* or *cinereicauda*; central rectrices dark metallic green to slightly bronze-green.

The white throat in normal males viewed in a strong light coming from behind shows a pale pink reflection. Some also have a faint tinge of violet along the lower edge of the gorget, and occasionally a violet feather along the side or even out among the white feathers. Very rarely a male in the range of this group has the throat purple. I have



examined a few museum specimens that show this peculiarity, but in four expeditions in the range of this form did not recognize one in life among the many white-throated birds seen.

Common in the subtropical and temperate zones in the higher levels of the Chiriquí Volcano.

*Lampornis castaneiventris cinereicauda* (Lawrence)

*Oreopyra cinereicauda* Lawrence, Ann. Lyc. Nat. Hist. New York, vol. 8, 1867, p. 485. (Costa Rica.)

*Characters:* Throat in male white as in typical *castaneiventris*, but breast lighter gray; tail distinctly gray. In many males the white of the throat is mixed with purple. Female, like *L. c. calolaema* in paler color of the lower surface; differs from other females in dull bronze-green to grayish bronze-green of central rectrices, and slightly paler color of the adjacent pairs.

Common in the mountains of southern Costa Rica from the northern end of the Cordillera de Talamanca, including the Dota area, eastward toward Panamá.

*Lampornis castaneiventris calolaema* (Salvin).

*Oreopyra calolaema* Salvin, Proc. Zool. Soc. London, 1864 (February, 1865), p. 584. (Volcán de Irazú, Costa Rica.)

*Oreopyra venusta* Lawrence, Ann. Lyc. Nat. Hist. New York, vol. 8, 1867, p. 484. (Costa Rica.)

*Characters:* Male, throat violet-purple; in general similar to male of *L. c. homogenes* of west central Panamá, but somewhat lighter gray on breast and abdomen; auricular region blacker. Female, like *L. c. cinereicauda* in paler color of lower surface, but with the central rectrices darker green.

Mountains of north central Costa Rica from the Cordillera de Tilarán to the volcanoes and higher ridges of the Cordillera Central.

*Lampornis castaneiventris pectoralis* (Salvin)

*Oreopyra pectoralis* Salvin, Ann. Mag. Nat. Hist., ser. 6, vol. 7, no. 4, April, 1891, p. 377. (Costa Rica.)

*Characters:* Male nearest in color to *Lampornis c. homogenes*, but breast with the green restricted, the lower area darker, near hair brown; throat darker; under tail coverts darker; green of foreneck and upper tail coverts decidedly darker. Female, like *L. c. calolaema*, but crown darker; averaging faintly paler below, especially on breast.

Mountains of northwestern Costa Rica and western Nicaragua.

From the scanty material seen, *pectoralis* appears to be a valid form, though as yet there is limited information concerning it. In the original description, cited above, Salvin said merely "Adult male. Similar to that of *O. calolaema* in all respects except that the breast, when viewed from in front, is nearly black, and not glittering green. The female is

probably indistinguishable from that of *O. calolaema*. Hab. Costa Rica." Later Salvin and Godman (1892, p. 308) listed the male mentioned above as in the Salvin-Godman collection, and two males and two females in the Gould collection in the British Museum (Natural History). Other authors who have mentioned this bird have quoted or cited Salvin. Warren (1966, p. 222) says of the type "Costa Rica, 1883. Obtained by Whitely; prepared by Endres." Peters (1945, p. 83) includes *pectoralis* with other subspecies of *castaneiventris* with a range in western Nicaragua and northwestern Costa Rica.

The U. S. National Museum has in its collections a male *pectoralis* that came with several other hummingbirds from the collector A. R. Endrés, in 1867, with the locality indicated as "Costa Rica," with no other information. Apparently all of the older specimens seem also to have come from this man. From what is known of the other races and their distribution, it is supposed that Endrés' birds were obtained somewhere in the northwest of the country.

*Specimens examined in comparisons:* *Lampornis castaneiventris castaneiventris*, PANAMÁ—CHIRIQUÍ: Cerro Punta, 4♂, 3♀; El Volcán, 10♂, 7♀; Boquete, 61♂, 23♀. *Lampornis castaneiventris cinereicauda*, COSTA RICA—Copey, 8♂, 8♀; Santa María de Dota, 17♂, 19♀; Las Vueltas, ♀. *Lampornis castaneiventris calolaema*, COSTA RICA—Peoresnada, ♂; Palmira, 2♂, ♀; Cartago, ♂; Rancho Redondo, ♂, ♀; Coliblanco, 5♂, 2♀; Navarro, ♀; Candelaria, 6♂, 3♀; Irazú, 4♂, 2♀.

Numerous others of these races with incomplete data have not been listed.

#### ***Trogon collaris heothinus* subsp. nov.**

*Characters:* Similar to *Trogon collaris puella* Gould,<sup>6</sup> but male with the bars on the tail narrower, the white bars being somewhat broader, more prominent, and the black ones correspondingly reduced; female duller, more grayish olive-brown on the upper surface and breast; size of *T. c. puella*, thus larger than *T. c. extimus* Griscom of Cerro Pirre, Darién.

*Description:* Holotype, U. S. National Museum no. 484312, adult ♂, from the north fork of the Río Pucro, 2000 m elevation, on Cerro Tacarcuna, Darién, Panamá, collected 28 February 1964, by A. Wetmore (original no. 26049). Upper surface (except the wings), lower foreneck and upper breast metallic green; central rectrices metallic green, tipped rather narrowly with black; two adjacent pairs black, with the outer webs metallic green; three outer pairs black, barred narrowly with white, except on the concealed area of the inner webs, the white bars being somewhat narrower than the black ones; the white band on the tip broader than the others; wings dull black; wing coverts and secondaries banded very narrowly with irregular lines of dull white; outer webs of longer primaries edged narrowly with white, especially

<sup>6</sup> *Trogon puella* Gould, Proc. Zool. Soc. London, pt. 13, April, 1845, p. 18. (Escuintla, Guatemala.)

toward the base; lores, space around eyes, auricular area, side of jaw, chin and throat black; a broad band of white across the upper breast; rest of lower surface deep red; under wing coverts dark slate, with the anterior series lined narrowly with white.

*Measurements (averages in parentheses):* Males (3 specimens), wing 121.3–122.4 (121.9), tail 137.4–139.8 (138.4), culmen from base 17.9–18.2 (18.0), tarsus 14.2–15.1 (14.7) mm.

Female (1 specimen), wing 121.0, tail 140.0, culmen from base 18.7, tarsus 14.0 mm.

Holotype, wing 122.4, tail 138.4, culmen from base 18.0, tarsus 15.1 mm.

*Range:* Known from Cerro Tacarcuna, and its southwestern spur Cerro Malí, in eastern Darién; presumed to be found through the elevated eastern area of the Serranía del Darién.

*Etymology:* The name *heothinus* from the Greek, is in the sense of eastern, from its range in the Republic of Panamá.

*Remarks:* As indicated in the summary of characters, this population is nearest the subspecies *puella*, found from southern México to the mountain areas of Chiriquí in western Panamá. The three males and one female from the Tacarcuna massif have been checked against long series of that race.

The nearest form to the new race geographically is *T. c. extimus*, described by Griscom from Cerro Pirre on the opposite side of the great Tuira valley. This differs from *heothinus* and *puella* in smaller size, and also, in the adult male, in the much broader white tip on the three outer rectrices. In this latter character *extimus* agrees with the forms of South America found to the south in the Andes of Colombia. It should be noted that comparison for this should be made with adult males of *puella*, as individuals in their first post-juvenile dress may have the terminal tail band broader than in adults that have completed a second tail molt. For comparison, the following are measurements of *extimus*: Males (5 individuals), wing 108.0–118.0 (113.1), tail 112.0–124.5 (117.3) mm. Females (4 individuals), wing 110.0–115.7 (113.6), tail 117.8–126.7 (121.9) mm.

*Specimens examined in comparisons:* *Trogon collaris puella*, MÉXICO—PUEBLA: Metlatoyuca, ♂. VERACRUZ: Cerro Tuxtla, 2♂, 3♀. TABASCO: Teapa, 2♂. CAMPECHE: Apazote, ♂. YUCATÁN: Tizimín, ♂; without other locality, 2♂. CHIAPAS: Chicharras ♂, ♀; Tumbala ♂, ♀. GUATEMALA—Alotenango, ♂; no other locality, 2♀. HONDURAS—without other locality, ♂. COSTA RICA—Zarcero, ♂; San Mateo, ♂; Barranca, ♂; Copey, ♂; Santa María de Dota, ♂, 3♀; Irazú, ♂; Coliblanco, ♂; Cuayabo, ♂, 2♀; Bonilla, ♀. PANAMÁ—CHIRIQUÍ: Santa Clara, 2♂, 3♀; El Volcán, 7♂, 8♀; Cerro Punta, ♀; Buena Vista, ♂; Boquete, 2♂, 3♀. *Trogon collaris extimus*, PANAMÁ—DARIÉN: Cerro Pirre, 5♂, 4♀. *Trogon collaris virginialis*, COLOMBIA—ANTIOQUIA: Hacienda Potrerros, 4♂, 2♀; CAUCA: without other locality, 4♂. ECUADOR—Paramba-Imbabura, ♂. *Trogon collaris subtropicalis*,

COLOMBIA—ANTIOQUIA: La Bodega, 2♂; Hacienda Zulaiba, 2♀; Valdivia, ♂, ♀. CALDAS: Hacienda Sofía, ♂. HUILA: Belén, 2♂, ♀; La Candela, ♀.

*Lysurus crassirostris eurous* subsp. nov.

*Characters:* Similar to *Lysurus crassirostris crassirostris* (Cassin)<sup>7</sup> but with the longitudinal central yellow band on the breast and abdomen narrower and faintly duller yellow; gray of side of head lighter, less blackish; lower foreneck grayer; pileum darker, more chestnut brown; bill slightly larger.

*Description:* Holotype, U. S. National Museum no. 484963, adult ♂, 1250 m elevation near head of the north fork of the Río Pucro, Cerro Tacarcuna, Darién, 28 February 1964, A. Wetmore (original no. 26068). Crown and hindneck liver brown; back, scapulars and rump olive-green, the upper tail coverts duller, darker; tail dull slaty black, with the outer webs dull olive-green; wing coverts basally dull fuscous-black, edged with deep olive-green; primaries and secondaries dull fuscous-black, with the outer web edged with dull olive-green; side of head, including lores and narrow space above eye, blackish gray; malar region, chin and throat white, tipped with dark gray; lower foreneck dark gray with the feathers blacker basally; breast, sides and under tail coverts dark olive-green, with a narrow area of rather dull yellow down the breast and upper abdomen; edge of wing dull yellow marked lightly with olive; under wing coverts pale dull greenish slate.

Iris dark brown; maxilla, except cutting edge, black; mandible and basal half of cutting edge of maxilla neutral gray, becoming brownish gray on anterior half; tarsus and toes fuscous-brown; claws somewhat brownish dark neutral gray. (Colors recorded from the bird in the flesh).

Measurements of holotype, wing 73.9, tail 58.4, culmen from base 17.3, tarsus 27.5 mm.

*Remarks:* The holotype was taken in a mist net set across the narrow stream of the north fork of the Río Pucro on the high slope of Cerro Tacarcuna. It is the first record of the species for eastern Panamá. The typical form, *Lysurus crassirostris crassirostris* is found from Costa Rica in the Cordillera Central to the higher mountains of Chiriquí and Veraguas, in Panamá ranging also to the Caribbean slope in western Bocas del Toro.

From examination of more than 40 specimens of typical *L. c. crassirostris* the holotype of the Darién bird differs clearly in the characters listed.

Measurements of *L. c. crassirostris* are as follows (averages in parentheses):

Males (15 from Costa Rica, Chiriquí and Veraguas), wing 74.0–

<sup>7</sup> *Buarremon crassirostris* Cassin, Proc. Acad. Nat. Sci. Philadelphia, 1865, p. 170. (Barranca, Puntarenas, Costa Rica.)

80.1 (76.7), tail 58.6–68.9 (63.1), culmen from base 16.0–17.5 (16.6, average of 14), tarsus 27.3–30.1 (28.7) mm.

Females (15 from Costa Rica, Chiriquí, and Bocas del Toro), wing 70.8–75.3 (73.9), tail 56.5–62.3 (59.1), culmen from base 15.5–17.4 (16.5, average of 14), tarsus 26.1–28.8 (28.0) mm.

The new form is definitely allied to nominate *Lysurus c. crassirostris* in having a yellow central stripe on the under surface, more extensive on the upper breast, and broad throughout as well as bright yellow. Also, the markings of the foreneck and the side of the head are blacker. *Lysurus castaneiceps* (Sclater) that ranges north on the western slope of the western Andes to northwestern Antioquia (Frontino) in Colombia, has the throat and foreneck plain dark gray, mottled faintly with dull black, but without white. The breast in some of the Andean birds has the olive green feathers lightly washed with dull olive-yellow, but this forms merely a hint of the distinct yellow band on the under surface in the northern species. One specimen in the Academy of Natural Sciences has a trace of white in the malar area below the eye, and a little more as faint edgings on the feathers of the chin. These are indications of relationship, but from available evidence it appears that the two have been long separated.

*Etymology*: The subspecific name *eurous* is from the Latin meaning eastern.

*Specimens examined in comparisons*: *Lysurus crassirostris crassirostris*, COSTA RICA—La Hondura, 3♂, 2♀; Cariblanco de Sarapiquí, ♂, 2♀; Carrillo, ♂, ♀; Santa Cruz de Turrialba, ♂; Guayabo, ♀; Navarro, ♀; Buena Vista, ♀. PANAMÁ—CHIRIQUÍ: Boquete, 10♂, 3♀; Cordillera de Tolé, ♀. BOCAS DEL TORO: Cedral, ♀. VERAGUAS: Cordillera del Chucú, ♀; Chitra, ♂, 2♀. *Lysurus castaneiceps*, COLOMBIA—ANTIOQUIA: Hacienda Potreros, ♀; Frontino, ♀. CAUCA: Gallera, ♂; El Tambo, 2♂; Novita Trail, ♂, ♀; Cocal, ♀. CALDAS: La Selva, 2♀. ECUADOR—Gualea, ♂; Nanegal, ♂; Sumaco Abajo, ♀. PERÚ—Marcapata, ♂, ♀.

#### OTHER ADDITIONS TO THE RECORDED LIST OF BIRDS FROM THE REPUBLIC OF PANAMÁ

*Myiobus villosus villosus* Sclater, Tawny-breasted Flycatcher.

The first records for the Republic of this species, widely distributed in South America, come from the higher ridges of Cerro Tacarcuna, Darién, near the Colombian boundary. The first one taken, a male, was caught 2 March 1964, in a mist net set at 1460 m. On 7 March, after I had moved to another camp on the lower base of the mountain, Charles O. Handley, Jr. secured another, a female. This specimen was captured at 1250 m in a mist net set across a small stream, tributary to the headwaters of the Río Tacarcuna. In northwestern Colombia the nearest population of these birds is found in the upper tropical and subtropical zones in the mountains of Antioquia, separated from the Serranía del

Darién of Panamá by the broad lowlands of the lower basin of the Río Atrato.

*Myiodynastes chrysocephalus minor* Taczanowski and Berlepsch, Golden-crowned Flycatcher.

This flycatcher, widely distributed in the mountains of Colombia and Ecuador, is known in Panamá from two specimens in the collections of the U. S. National Museum. E. A. Goldman collected a female on Cerro Pirre, Darién, 17 April 1912, at 1580 m near the head of the Río Limón. The second, a male, was secured by Dr. Pedro Galindo of the Gorgas Memorial Laboratory on the slopes of Cerro Tacarcuna, Darién, on 25 May 1963. This bird was taken at 1460 meters near the point where the ridge of Cerro Malí joins the main Serranía del Darién, a short distance from the boundary line with Colombia.

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